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ABSTRACT

In the State of Illinois, the Office of the Superintendent of Public Instruction is placing considerable emphasis on the concept of individualized instruction. With this concept in mind this monograph offers a series of teacher-written articles on individualized instruction in business education. The topics covered are: An Overview, by Willie Pyke; Individualized Typewriting, by Earl Flood and Jennie Cox; Individualized Instruction in Shorthand: First and Second Years, by James W. Claxton; Individualized Instruction as Part of a Five-in-One Approach for Teaching Office Machines, by Sharon Anne Fisher; Success in Individualized Accounting, by Carleen Presley; Individualized Instruction in Data Processing, by Dale Manning; A Knight's Daze About Credit, by E. Duane Hill and Thomas O. Stanley; Consumer Education: The Need to Individualize, by John Manzer; Cooperative Education: Individualization from the Start! by Beverly J. Hackett; An Evolving Program for Individualizing Learning: Reflections After Four Years, by Jeanne Dahl. Selected references and a list of IBEA board members are also included. (BP)

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INDIVIDUALIZED LEARNING ACTIVATED BY BUSINESS EDUCATORS IN ILLINOIS

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ILLINOIS BUSINESS EDUCATION ASSOCIATION
1974

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INDIVIDUALIZED LEARNING ACTIVATED BY BUSINESS EDUCATORS IN ILLINOIS

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PREFACE

Individualized instruction is a concept which is receiving considerable attention nationwide. In the state of Illinois, the Office of the Superintendent of Public Instruction is placing special emphasis on the implementation of this concept. There are many methods of individualization currently under experimentation: independent study, simulation, contract system, programmed learning, audio-tutorial systems, and computer-assisted instruction. Any wide-scale use of this teaching strategy generally requires the use of learning laboratories and/or learning resource centers. Although there has been individualization of instruction for many years, additional experimentation and more sophisticated technology now make possible many opportunities not available in earlier years.

Students should have options in choosing the degree of individualization which fits their learning patterns best. Forced individualization as a method for all may well leave the "could-care-less" student unmotivated. Yet, on the other hand, the so-called traditional classroom involving "lockstep" performance has often killed initiative on the part of both bright and indifferent students. The challenge is to provide a *learning mix*.

The state of Illinois is fortunate to have many innovative business educators. The collection of articles in this monograph attest to this claim. The teachers who have written here are to be complimented for their efforts in helping each student "listen to his or her own drummer." Hopefully, their articles will help other business educators provide increased learning opportunities for their students through individualized instruction.

Writesman Long

Writesman Long, President
Illinois Business Education Association

BASIC CONSIDERATIONS FOR INDIVIDUALIZING INSTRUCTION
An Overview

Willie O. Pyke
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Students differ among and within themselves in several important determiners of their readiness for learning. Individually prescribed instruction represents attempts to eliminate the teaching of whole classes at a time by allowing students to work at their own pace at tasks prescribed by teachers based on frequently administered measures of learning on small and carefully planned units of instruction.[1]

Since learners do differ in ways relevant to their ability to profit from various types of instruction, content, and incentives, instruction adapted to individual differences should be more effective. Skinner considered holding students together in a class as probably being the greatest source of inefficiency in education.[2] Yet, despite several decades of concern with individualization, Gage claims "the evidence from attempts to individualize instruction has not yielded drastic results."[3] Suppes concluded that although this type of instruction can provide some guided discovery, it will not in the immediate future make possible any genuine dialogue between teachers and learners.[4]

Gage cites specificity as the great virtue of individualized learning. It reduces the amount of disorder in what the teacher does. However, he feels that it goes too far in a good direction because both the content and procedure of the teacher's work are spelled out in great detail. It imposes too much inflexibility on the teacher.[5] Jackson contends that present-day classroom work with its "stray thoughts, sudden insights, meandering digressions, irrelevant asides, and other unpredicted events" also makes life hard for teachers.[6] Gage suggests that we need a happy medium between excessive systematization and the spurious freedom of the opportunistic and unpredictable present-day classroom.

Individualizing Instruction in Business Education Subjects

On the basis of the foregoing discussion, what are some of the implications for business education? Have the attempts to individualize instruction produced optimum learning outcomes? What are some of the major weaknesses? Most important, how can future attempts to individualize instruction be executed so that maximum, efficient learning outcomes are achieved?

An examination of those business education departments which are involved with individualized instruction will reveal that there is considerable variance with regard to program content and the extent of individualization.

This is as it should be; the decision as to how individualized instruction is utilized should be based upon the needs of a particular business education department. In some instances, individualized instruction constitutes a major part of the teaching-learning process, and teacher participation is minimal. In other cases, teacher participation dominates the teaching-learning situation, and individualized programs are used to a lesser degree. Therefore, the writer makes no attempt to spell out a detailed plan of action. Extensive pertinent research needs to be conducted before attempts are made in this direction. The intent is to provide some general guidelines which will be beneficial in assisting those teachers who wish to individualize their business education classes. Hopefully, these guidelines will also be beneficial in appraising and critically analyzing classes where individualization is already being emphasized.

These guidelines take into consideration the varying degrees of individualization and teacher participation. Hence, the teacher, hardware, and software are *each* considered vital components in planning, implementing, and evaluating these guidelines.

Establishing a Frame of Reference for the Course

There are five major areas of concern for the teacher with regard to establishing a frame of reference for the course:

1. General objectives for the course, unit, or lesson should be established.
2. Specific objectives should be delineated.
3. The activities necessary to achieve the objectives should be identified.
4. Materials and equipment involved in implementing the activities should be listed.
5. Evaluation should be made to determine the effectiveness of the plan.

Providing for Teacher Flexibility

The course should be designed so as to allow teachers to utilize spontaneity, creativity, and artistry as a supplement to the teaching. Individually prescribed instruction should not spell out both content and procedure of the teacher's work in great detail. If it does, it imposes too much inflexibility on the teacher.[7]

Integrating the Requirements for Efficient Learning in the Course

In order for learning to take place, the learner must be motivated. Therefore, provisions should be made to insure that the learner is paying attention; without attention to stimuli, there can be no learning. Course content should be structured so that the learner is continually engaged in making

relevant responses. Relevant cues should be made prominent, and distracting stimuli reduced. There should be a sequential presentation of what is to be learned that leaves no important gaps. It is essential that each person learns at his own best rate. Provisions must be made to provide the learner immediate feedback for his responses.

Course Content: Learning Sequences Should be Carefully Outlined

Perkins contends that psychological organization often determines the ultimate success of any instructional program. He provides a list of questions which are essential to the teacher-organizer in writing material or planning a lesson. These types of questions will assist the program writer to lay out the order of the content in the most efficient manner:

a. What does the student need to know before he can grasp something else?
b. What must a student be able to do before taking the next step?
c. Have I considered the simple-to-complex principle?
d. What order of learning would likely promote the greatest amount of retention and transfer?[8]

While all of the above points warrant careful consideration, perhaps more elaboration is needed with regard to transfer. Transfer of learning should be a major concern of all business teachers. Knowledge gained in the classroom must be applicable to real life situations. Therefore, course content should be designed to create maximum positive transfer. Learning outcomes should be compatible with on-the-job requirements or real life experiences.

Evaluation of the Course

A major purpose of evaluation is to determine the worth of the course, and this worth should be expressed in relation to some type of criterion. No doubt there are several worthwhile criteria teachers will use in course evaluation. However, this discussion will focus upon two criteria which are considered imperative in evaluation, and they are: (1) process, and (2) product.

The process concerns the series of progressive and interdependent steps by which an end is attained. Process components include: objectives, activities, materials and equipment, learning procedures, and course content. The product refers to the student; namely, the learning outcomes gained as a result of the instruction.

In order to evaluate the effectiveness of the course, the teacher must critically analyze all of the process components in relation to student learning outcomes. If the instruction does not result in desired student performance goals, the teacher must identify the inherent weaknesses within the process and

proceed to correct them. This implies that the teacher must continuously look at objectives, activities, materials, equipment, learning procedures, and course content in order to determine the component(s) which are deficient in assisting to create desired learning outcomes.

As an example, vocational competency is an ultimate objective of a majority of skill courses. Therefore, it is essential that teachers realize that no matter which method of instruction is used, the end goal is to produce students who are proficient in meeting on-the-job standards. If the use of an individualized instructional technique is superior to the traditional method in meeting these standards, by all means it should be utilized. However, there must be some concrete way of comparing a method with student performance outcomes. In addition to the type of evaluation outlined above, the teacher could conduct some type of classroom research which is designed to compare student learning outcomes based upon the traditional methods of teaching with instruction based upon the individualized approach. The results of this type of research should assist teachers in determining whether one teaching approach is superior to another.

Research findings tend to support the premise that the outcomes of individualizing instruction have often been discouraging. Experts are not only citing the need for new research in the area but research with new dimensions. No doubt, scholars will eventually respond to this challenge; and, hopefully, teacher effectiveness and student progress will be enhanced. In the interim, classroom teachers must continue to rely upon existing evidence as they go about their job of improving the teaching-learning process. On the basis of the above, it should be evident that this article cannot in any way be considered Utopian in describing a detailed plan of action for teachers. Only guidelines and considerations for teachers who are utilizing or contemplating the use of individually prescribed instruction are provided.

FOOTNOTES

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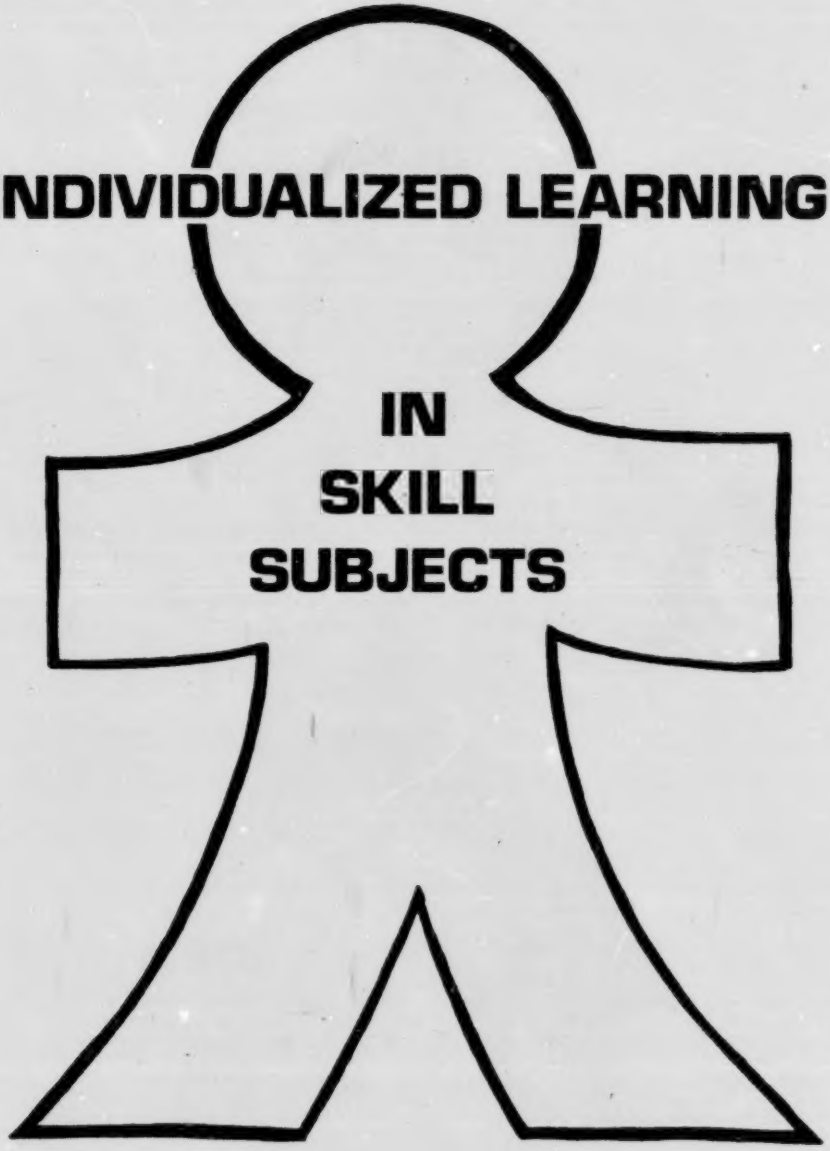
INDIVIDUALIZED LEARNING



IN SKILL SUBJECTS

INDIVIDUALIZED TYPEWRITING

Earl Flood and Jennie Cox
East Alton-Wood River High School
Wood River, Illinois

Would you answer the following questions "Yes" or "No"?

Would you like to add zip to your typing classes?	**YES**	**NO**
Would you like a classroom setting where students are working harder the last day of school than they did the first day?	**YES**	**NO**
Would you like to have a teaching situation where you can allow the slower student extra time on any phase of learning without holding back the better student?	**YES**	**NO**
Would you like to do away with long after-school makeup sessions for the student who has missed school for an extended period of time?	**YES**	**NO**
Would you like a grading plan that holds paper checking to a minimum?	**YES**	**NO**

If you answered "yes" to the above questions, then you may want to consider individualized instruction through the use of Learning Activity Packages (LAPS). It was for these and many other reasons that East Alton-Wood River Community High School decided there must be another way to teach typewriting than the "traditional method." The following describes how this is accomplished with the use of LAPS.

How to Begin

For the first six or seven weeks of school, all students learn the keyboard together in the traditional way. In addition to the regular keyboard drills, an attempt is made to familiarize completely the student with the different parts of the machine and their uses.

Sometime during the first week, the students are given a short preview of the introductory LAP with the hope that this will inspire them to develop the basic skills so that they may go to LAP typing as soon as possible.

The introductory LAP includes:

1. Why LAP typing?
2. When to begin LAP typing?
3. What's in a LAP?
4. How will grades be determined?
5. What amount of credit can be earned?

Why LAP Typing?

1. It's fun! Everybody does his own thing!
2. One can work at a pace that is comfortable.
3. Everyone can succeed--only "do nothings" fail.
4. One can make more decisions than with the traditional method.
5. Initiative + Responsibility = Success in LAP typing.

This thinking is somewhat of a "turn-about face" to what typing students encountered with the "traditional method" where every student is introduced to the same thing at the same time regardless of readiness for new learning, absences, and other deterrents. Students soon begin to realize that to be successful in typewriting they compete only with themselves.

When to begin LAP Typing?

Begin LAP typing as soon as the student can do the following:

1. Type letters, numbers and symbols by touch.
2. Efficiently use the operative part of the typewriter--such as setting margins, tab stops, etc.
3. Type approximately 25 words on a 1-minute timed writing with not over 3 errors.

The staff at East Alton-Wood River High School believe that these are minimal achievement levels to be reached before utilization of the LAPS. If a student is far below these skills, he is given additional drill work and is allowed to begin LAPS on a limited basis. Each student should be allowed to "get a taste of LAPS" early because this often adds incentive to improve his basic skills.

What's in a LAP?

1. Introduction (a brief statement of how the learning in a particular LAP can be used).
2. Objectives or AT THE END OF THIS LAP YOU SHOULD BE ABLE TO: These statements tell *exactly* what must be done before completing the LAP and how much time is allowed to do it.
3. REMEMBER . . . a brief review of information needed in this LAP.
4. MATERIALS NEEDED.
5. NEW LEARNINGS: This information tells what and how to do the new work.
6. GENERAL INFORMATION FOR ACTIVITIES: These are the directions for typing the activities.
7. ACTIVITIES: These are the problems to be typed. They help develop the skill needed to meet the objectives of the LAP. There may not be a need to do all the activities.
8. SELF-CHECK: The "self-check" is to assist the student in determining when he is ready for the "performance check." If he cannot pass the

"self-check," a need exists to go back and do more activities. He may take the "self-check" when he believes he can meet the objectives of the LAP.

9. PERFORMANCE CHECK. This section is not included in the LAP; the teacher administers it to the student when he has successfully completed the "self-check." It is very similar to the "self-check." This check is always taken with the teacher's "eagle eye" watching over the student. A grade is determined for the performance check.

Most of the 33 LAPS that have been developed contain the above features. However, a few LAPS have been modified. For instance, a complete manuscript does not lend itself to a performance check.

How is the student graded?

A = Completion of the required number of LAPS for a specific amount of credit, such as 1/4, 1/2, 3/4, 1, 1-1/4, or 1-1/2. He must have an "A" average on performance checks and an "A" in speed and accuracy.

B = Completion of the required number of LAPS for a specific amount of credit. He must have a "B" average on performance checks and a "B" in speed and accuracy.

C = Completion of the required number of LAPS for a specific amount of credit. He must have a "C" average on performance checks and a "C" in speed and accuracy.

D = Completion of the required number of LAPS for a specific amount of credit. He must have a "D" average on performance checks and show some progress in speed and accuracy.

F = Failure. This grade is given only to those students who "do nothing."

I = Incomplete. This means that he has not yet completed the required number of LAPS for a unit of credit. An incomplete grade will be given only at the end of the first and third quarters. The student will be given a grade on the amount of credit he has earned at the end of each semester.

If the student makes below a "B" on a performance check, the grade is reviewed with him; and he is given the option of retaking a performance. A large percentage of the students work for the "A" or "B" grade.

What amount of credit can the student earn?

The answer to this question is up to the student. He can earn from 1/4 to 1-1/2 credits in typewriting. This depends on his initiative and ability. The amount of earned credit is based primarily upon the number of successfully completed LAPS and the speed and accuracy levels achieved for various timed writings. As examples, the requirements for gaining 1/4 and 1/2 credits in typewriting are:

I. 1/4 credit will be earned upon:

A. Mastery of the keyboard. Mastery of the keyboard means that the student has learned to manipulate the alphabetic and numeric keys by touch—eyes on copy with correct techniques.

B. Completion of the following LAPS
   LAP 1 – Horizontal Centering
   LAP 2 – Vertical Centering
C. Speed standards
   A = 40 words a minute on a 1-minute writing with not over 3 errors. Student must submit three writings.
   B = 35 words a minute on a 1-minute writing with not over 3 errors. Student must submit three writings.
   C = Student shows progress—a continuous growth in speed or a reduction in errors.
   F = No progress is shown.

II. 1/2 credit will be earned upon completion of:
A. 1/4 credit as explained in Section I.
B. Completion of the following additional LAPS
   LAP 3 – Word Division
   LAP 4 – Announcements, Personal Notes, and Postal Cards
   LAP 5 – Personal Business Letters with Envelopes
   LAP 6 – Outlines
   LAP 7 – Techniques of Erasing on Original Copy
   LAP 8 – Introduction to Rough-Draft Typing
   LAP 9 – Introduction to Manuscripts without Footnotes
C. Speed standards
   A = 40 words a minute on a 3-minute writing with not over 6 errors. Student must submit three writings.
   B = 35 words a minute on a 3-minute writing with not over 6 errors. Student must submit three writings.
   C = Student shows progress—a continuous growth in speed or a reduction in errors.
   F = No progress is shown.

Conclusion

At the end of the 1973 school year, 174 of the first-year students had completed the LAPS for one or more units of credit, 49 had earned 3/4 credit, and 15 had earned 1/2 credit.

Do the students like individualized instruction? At the end of the school year, a student survey was made. The question "Do you like the idea of progressing and earning credit at your own rate of speed?" was included in the survey. There were 190 who responded "yes" while only 29 said "no."

Why do teachers like the LAP program? Probably the basic reason is that they become "directors of learning" rather than filling the role of the traditional classroom teacher and because "Yes" can now be answered to each of the introductory questions.

INDIVIDUALIZED INSTRUCTION IN SHORTHAND
First and Second Years

James W. Claxton, Chairman
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St. Teresa Academy, East St. Louis, Illinois

Individualized instruction lends itself well to teaching shorthand. The procedures in using individualized shorthand instruction at St. Teresa's Academy will be described, starting with first-year shorthand.

There are several excellent Shorthand I texts on the market which are set up for individualizing instruction. One of these is the *Gregg Adult Education Shorthand I Kit*. Since this is a consumable kit, not all schools can afford to use it. However by using the guides to be explained, any shorthand text can be adapted to individualize first-year shorthand. Shorthand I could be discussed in terms of two semesters. However, with individualized instruction, there is a difficulty of breaking it into restricted semesters. Therefore, it is divided into completion of theory and completion of dictation-transcription.

Completion of Theory

With individualized Shorthand I, the primary objective is to let the student proceed at his own rate from the first day to the completion of theory. In order to do this, the student must start with a complete set of guidelines from the instructor. On this guideline sheet, the student should be given a list of instructions explicitly stating how to complete the theory section of the course. Such information as how to use shorthand notebooks, what is the best pen, and how many times outlines and letters should be written should be given on the guideline sheet. MOST IMPORTANTLY, a student should be given a sample of how to start Lesson 1 and how it should look when completed. At St. Teresa Academy, grammar and punctuation skills are handled in the Business English course which is taken concurrently with first-year shorthand.

At the end of each theory lesson, the student is given a self-check test of symbols and words from that lesson. This self check should have a time limit and accuracy goal, e.g., 15 minutes and 5 errors.

If a student passes this goal, he moves on to the next lesson. If not, he reviews the lesson and then re-takes either another or the same self-check test. After Lesson 5, the reading and writing practice should be put on tape for the student to practice writing from dictation. It is suggested that a student should write a dictation practice 5 times. The student is now writing shorthand in the notebook, taking self tests, and practicing dictation.

What is the Instructor Doing?

The instructor in a classroom checks notebooks for proper outline form, gives self checks, and gives a written test for grade-recording purposes after a student has completed five sections. Grades are never given on self checks. They serve to indicate how the student is progressing. Time in class is also used to help students with such problems as keeping up and writing legibly. The instructor spends his time helping each student with his individual problems.

Completion of Dictation-Transcription

After theory has been completed, the student moves to dictation and typewriter transcription of new matter. It should be remembered that this will occur at different times for different students. *No student should be allowed to move into this phase of Shorthand I without* having successfully completed all of the sections of shorthand theory.

In this phase, students usually are tested once a week on a 3-minute new matter dictation beginning at 60 words per minute. After the student successfully passes new matter dictation 3 times at 95 percent accuracy, he moves to 70 words per minute and continues in this manner as far as he can go for the remainder of the year.

Between the testing times, the students practice from dictation tapes or records in order to pass the test. The teacher recommends that the students practice 10 to 20 words above the speed of the test they hope to pass. Also, the student practices writing from a second semester shorthand book. Before the student takes a test, he shows the instructor "x" number of pages from shorthand dictation practice and "x" number of pages from textbook practice.

Credit and Grades

As my experience has been limited to the giving of credit and not grades, the alloting of grades for Shorthand I would have to be determined by individual instructors. In the giving of credit, the process is very simple. One-half credit is given to the student at the completion of theory (not at any time before) and one-half credit is given upon completion of three new matter transcripts at "x" words per minute with 95 percent accuracy, whatever is established by the teacher.

Individualizing Instruction in Shorthand II

Individualizing instruction in Shorthand II is a very simple process but takes a lot of time and dictation material. Class time with an instructor need be one day a week for approximately one hour. This one day a week is for purposes of testing speed and achievement. All other student time is spent in practice.

Individualized instruction in Shorthand II consists of taped dictation practice and preview word booklets. This program consists of taped dictation material ranging in speed from 60 to 180 words per minute. For each level of speed, there is a series of 40 tapes. Each tape contains 3 or 4 letters. Preview words precede each of the letters.

Before each of the tests, a student practices the speed he chooses from a series of 4 tapes. From these tapes, he types 5 transcripts. On the day preceding the test, the student hands in the shorthand practice notes and the 5 typewritten transcripts. A student's schedule might be

1st Week

Practice	Type	Test on
90 1A	1 letter	70 words per minute
90 1B	1 letter	
90 1C	2 letters	
90 1D	1 letter	

2nd Week

90 2A	2 letters	70 words per minute
90 2B	1 letter	
90 2C	1 letter	
90 2D	1 letter	

When the student successfully completes three tests at 70 words per minute, he/she begins practicing Series 1 of the tapes at 90 or 100 words per minute and takes tests at 80 words per minute. This process would continue until the student had completed all of the requirements of the course for the year. All transcripts in Shorthand II must be mailable.

If the tests were placed on tape also, the instructor with a tape lab might find it possible to do all speed testing in one day at one time. If these were not available, the instructor would have to work out a testing schedule that would be easiest for him/her.

Summary

Each instructor will find that individualized shorthand will work differently with every system. Variables such as grades will also make a difference in how the system will work. HOWEVER, the most important point that can be made is that the student must proceed on his own, getting aid from the instructor, and not be taught in a traditional classroom structure. If the student is not able to work at his own rate of speed, the process will not be individualized instruction in shorthand.

INDIVIDUALIZED INSTRUCTION AS PART OF A FIVE-IN-ONE APPROACH FOR TEACHING OFFICE MACHINES

Sharon Anne Fisher
Mid-Valley Area Vocational Center
Maple Park, Illinois

Mid-Valley Area Center serves five schools: Batavia, Burlington-Central, Geneva, Kaneland, and St. Charles. These five schools send their students to Mid-Valley for vocational programs in seventeen areas. Office practice is a clerical and secretarial, two-year program. Classes meet for two hours a day, five days a week. The students choose to enter either the clerical or secretarial field.

Since 1969 when Mid-Valley first opened its doors to students, office practice has tripled in enrollment. In order to accommodate these additional students and to upgrade the program, a number of teaching methods have been implemented.

Individualized instruction is one of five approaches used in the office practice classes. A "five-in-one" approach to teaching office practice includes traditional classroom methods, simulation, individualized instruction, actual work experience, and placement with follow-up.

The individualized portion of the program utilizes sound-slide equipment correlated with student packets. The sound-slide presentation introduces machine parts, purposes, et cetera. The student packet includes a pre-test, performance objectives, related handouts, and assignments. It also includes the tapes for the sound-slide presentations. When the student completes the unit, a post-test is given. If the student passes successfully, she may go on to the next unit. If not, review material is available.

The individualized program includes 14 machines. Duplicating, calculating, voice transcribing, and specialized typewriters are the broad areas under which the machines are grouped.

The sound-slide units that are used automatically progress from slide to slide unless the student uses the footpedal available to her. For instance, when the student is working on the unit, "Preparation of a Master for Duplication," she may stop the machine by releasing the footpedal until she completes the directions given by the tape. After she completes the directions, she may then continue by depressing the footpedal.

Also included with the sound-slide program is a programmed testing mechanism. These tests are used as self-tests. The students depresses A, B, C, or D to a question presented to her on the tape and/or slide. If the student answers

correctly by pressing the correct button, the tape and slide will automatically progress. If the student answers incorrectly, the tape and slide will not move to the next question. The student then has a second chance, third chance, and finally a last chance. The teacher is able to check the student's responses because they are recorded on a card similar to an IBM 80-column card. If the card has three holes punched for any question, the teacher knows that the student definitely has had problems with that particular question. The teacher can then work with the student with one option being the assignment of additional individualized activities.

None of the individualized units has been purchased through publishing companies. They have been developed by the instructor. Developing these units involved the following steps:

Decide which machines are to be taught using individualized instruction.

Formulate objectives, pre-test, assignments, handouts, and post-test for each machine.

Decide exactly what media will be used to meet various objectives, e.g., sound-slide, tape only, information sheets.

If pictures or slides are to be used, take required pictures to correlate with scripts. Read the sound portion of the package.

Assemble the student packets from the accumulated materials.

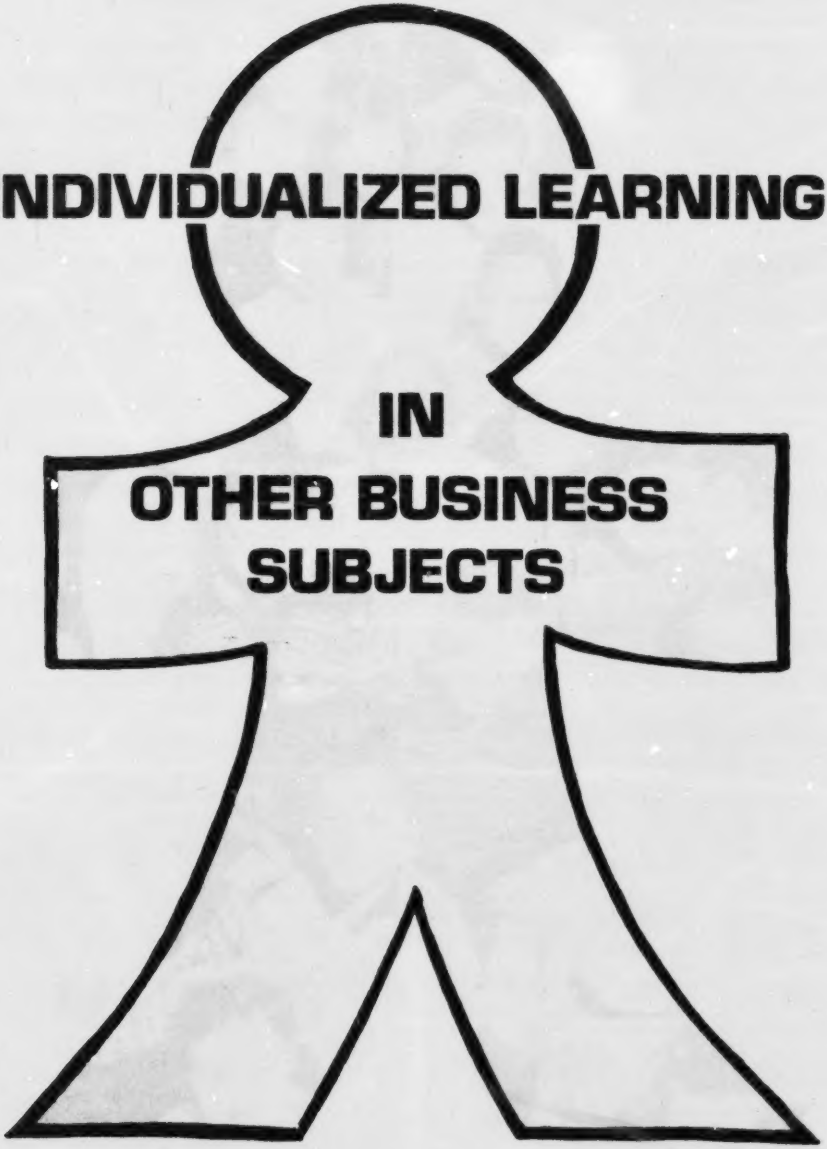
Set aside a filing cabinet or resource table where students may obtain their packets on their own.

You're ready to begin!

Individualized instruction was implemented for a variety of reasons. Students vary immensely in ability which is true in many business classes. However, since our only prerequisite is one semester of typing, the senior office practice class has girls who type from 15 to 80-90 words per minute. Obviously, each girl should not be allowed the same amount of time on the Selectric II to get the same amount of work completed. Therefore, the individualized approach was implemented.

The individualized approach was also developed so that students could work ahead. If they complete all the required individualized units before the simulation begins, they are encouraged to work on practice sets or special typing projects. In some instances, they are released from class to take dictation from the director of the Center.

Of course, individualized instruction is not the only approach used. Other methods, such as simulation, group work, actual work experience, and placement with follow-up are utilized. The five approaches used together account for the success of each. Used alone, each approach would lose some of its effectiveness.


INDIVIDUALIZED LEARNING
IN
OTHER BUSINESS
SUBJECTS

SUCCESS IN INDIVIDUALIZED ACCOUNTING

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The phrase, "Nothing succeeds like success," becomes a reality when accounting is individualized. This approach to teaching allows a student to progress at his own rate, and in so doing helps him to build self-confidence, a sense of pride in his accomplishments and removes fear of test and failure. Most students enter accounting with very little background knowledge of the subject and with varying degrees of ability to grasp the new concepts. Consequently, individualized instruction allows for these needs.

In this type of program, new material may be presented to the whole group for only a short period of time. Usually the introduction of increases and decreases in accounts will divide the class into groups. At this point, three or four groups are formed and they are allowed to pace themselves—guided by the instructor. New material may be presented to a small group using the blackboard, overhead projector, tapes, filmstrips and charts; or the presentations may be videotaped ahead of time for viewings followed by small group discussions. In these small groups, it is easy to recognize the students who are having difficulty. Also, students are less apprehensive about asking questions in small groups.

By stating the objectives, instructions, activities, and type of evaluation in Learning Activity Packets, many students will be able to proceed with minimum explanation. This frees the instructor for more concentrated work with slower students. This is especially valuable if there are disadvantaged or handicapped students in the class. To accompany these LAPS, there should be supplementary packets of materials for late enrollees and for extra difficult areas as bank reconciliations, worksheets and closing entries. Tapes to accompany filmstrips, worksheets and post test on these subjects are helpful.

In an individualized program, minimum requirements must be established for course credit. Incompletes may be recorded at grading periods if the student has not completed the minimum amount of work. To meet these requirements a few students will need definite assignments on a regular basis. However, most students will be able to work under a more relaxed schedule and set up their own completion dates. It is important to make a daily check of everyone's progress.

Students should be allowed to check their daily work with the instructor's key. The key may be placed in plastic sheet protectors and placed on a table near the instructor's desk.

As a group completes a chapter, they should take a Progress Test. The test should be completed with at least 90 percent accuracy. If this goal is not achieved, the student should review, do additional problems in weak areas, and have a conference with the instructor before retaking the part of the test he missed, or proceeding to the next chapter. Retesting makes it necessary to have at least two sets of tests available for all chapters, or at least a test covering areas known to be more difficult.

The Progress Test should be used only as a checkpoint for progress and *not* for a grade. A comprehensive test covering a unit of three or four chapters will give a good evaluation for a grade. If grades are assigned for Progress Tests, the comprehensive test should count at least one-half of the total grade.

Advantages of this type of program:

1. Students may help each other.
2. Self-pacing—guided by the instructor-eliminates some pressure.
3. Slower students receive extra needed help.
4. Progress test and retesting eliminates failures.
5. Easy identification of slower students through small group discussions and daily checks.
6. Better rapport with the students.
7. Students accept more responsibility of getting the work done.
8. Emphasis is shifted from grades to learning.

Possible Difficulties:

1. Keeping a daily check on everyone's progress.
2. Trying to assign grades under present traditional grading system. Evaluation progress sheets would be a better plan.
3. Planning time for preparing packets, test materials and special packets.
4. Making same presentation several times, but presentation could be videotaped to free instructor for other consultations and discussions.

Individualized instruction is not an easy way to teach! It requires a lot of time for the initial preparation; it requires constant consultations and discussions during class time; and it requires continued evaluation of the procedures in order to meet the varying needs of every student. But, individualized instruction is a very enjoyable and rewarding method of teaching.

INDIVIDUALIZED INSTRUCTION IN DATA PROCESSING

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Individualized instruction can play a major role in educating students in the field of data processing. However, this individualization must be accompanied by teacher contact and some group instruction to prepare the individual student for new terminology, new methods of problem solving, computer languages, and various technical processes.

Individualized instruction is best accomplished with hands-on machine experience. However, individualized instruction can be utilized without equipment. The degree of learning is dependent upon the type of instructional methods and the effort and ideas of each teacher.

Since business data processing in today's education can be separated into two areas--unit record and computers--it is necessary to look at the type of individualization that can be accomplished in each area.

Unit Record

It has been said that the teaching of unit record equipment is useless since mini-computers are approximately the same cost as a unit record system. However, many small businesses as well as larger organizations still use key punches, sorters, reproducers, and collators. Therefore, the teaching of a basic knowledge of unit record should be considered in the curriculum of a data processing class.

A variety of educational materials, which can be used to develop individual instructional programs, are available to data processing teachers. South-Western Publishing Company has developed a series of cassette tapes with filmstrips called *Introduction to Automated Data Processing*[1] which give an overview of the data processing course and could be viewed by each student. If unit record equipment is not available, programmed instruction courses on unit record equipment are available from IBM Corporation.[2] An instructor might also consider using the *Introductory Data Processing Projects*[3] published by South-Western for individualized instruction or solving of various projects as a class. Individual packets consisting of problems pertaining to the various pieces of unit record equipment can also be developed by each teacher. Homemade tapes of lectures on the various unit record equipment could be made and placed in the library or learning resource center for each student to use at his/her convenience.

If unit record equipment is available for individual projects, additional problems can be obtained from publishers of data processing materials. The *Key Punch Training Kit*[4] and *Sorter Tabulator Training Kit*[5] published by South-Western can provide problems that students can work at their own speed. Additional problems can be obtained from *Practical Projects in Data Processing*[6] published by the Anaheim Publishing Company. However, each instructor may desire to only use this material as references and prefer to design his own individual problems. A final project could be the development of a total unit record system problem utilizing all of the machines the student is able to operate. This system problem should be designed by each individual instructor. However, Science Research Associates have published a system project entitled *Punch Card Data Processing*[7] which includes the use of keypunching, sorting, reproducing, collating, and obtaining a printout with accumulated columns on the accounting machine.

Computers

Individualized instruction on computers, computer concepts, and various computer languages is available in programmed instruction books from computer manufacturers. An illustrative aid to the internal components of a computer that a student could do by himself is published by the Bell Telephone Laboratories called *Cardiac*.[8] The 3M Corporation has a series of programmed materials on computers which include overhead transparencies that can be viewed by an individual student or a class. Computer programming, however, is best accomplished through the use of a computer.

If a school system does not have a computer available, the instructor might consider a timesharing computer system. Through the use of a terminal, students can learn the fundamentals of programming by communicating directly with a computer. Many timesharing systems have computer assisted instructional programs in their libraries which can be used by each student to learn programming, business fundamentals, various forms of accounting, as well as numerous other areas. The Hewlett-Packard Corporation has developed an extensive library for its timesharing system which gives computer assisted instruction in the programming language called BASIC. Management decision games and a variety of other business applications are also available.

Problem solving using various computer languages lends itself to individualization in learning. These problems should range from simple to complex in difficulty. They should also pertain to present business needs. Many of the programming textbooks provide problems that can be used as a basis for developing individual programs. Yet, many of the best problems are developed by the teacher. Instructors may also have students develop their own problems and exchange them within the class.

With all of the individual instruction that can be obtained between a teacher and a student, many students will learn more from working with or

teaching other students to solve various problems. A balance of group instruction and individualization is necessary in data processing to provide each student with the knowledge necessary to comprehend the subject and develop the ability to work efficiently on his own.

FOOTNOTES

1. *Introduction to Automated Data Processing;* filmstrip and tapes, South-Western Publishing Company, Cincinnati, Ohio.

2. *Basic Unit Record Systems Principles;* programmed instruction course, International Business Machines Corporation, Data Processing Division, 112 East Post Road, White Plains, New York.

3. *Introductory Data Processing Projects* by Wanous, Wanous and Wagner, South-Western Publishing Company, Cincinnati, Ohio.

4. *Key Punch Training Kit* by William Bux, South-Western Publishing Company.

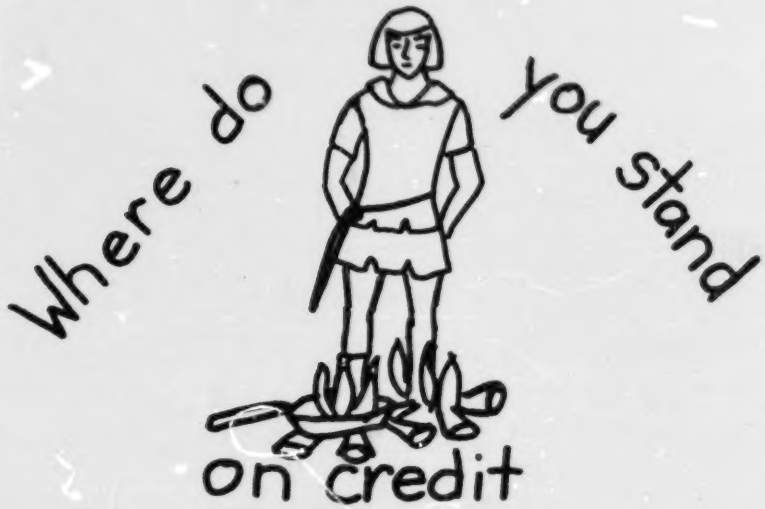
5. *Sorter and Tabulator Training Kit* by William Bux, South-Western Publishing Company.

6. *Practical Projects in Data Processing* by Thomas Cashman and William Keys, Anaheim Publishing Company, 925 North Clementine, Anaheim, California.

7. *Punch Card Data Processing Project* by Gustave Rath, Science Research Associates Inc., 250 East Erie Street, Chicago, Illinois.

8. *CARDIAC;* a cardboard illustrative aid to computation, Bell System Educational Aid, Bell Telephone Laboratories. (Contact your nearest Bell Telephone representative.)

A KNIGHT'S DAZE ABOUT CREDIT



We're here to proclaim
In story and verse,
That learning is fun,
Or painless at worst.

A knightly hero
With tales of woe,
Knows he needs credit
But where should he go?

The answer lies
In tasks herein,
Enough proclaimed,
Now let's begin.

E. Duane Hill
Illinois Central College
Peoria, Illinois

Thomas O. Stanley
Northern Illinois University
DeKalb, Illinois

The following is an outline of a learning activity packet. It has been developed for use in a Consumer Education or General Business class as an individualized method of introducing the legal aspects of credit.

Since stories, fables and parables have often been used to promote learning, why not combine them with action involvement by the student and create an extremely positive and unusual learning environment? Here's how.

Drafted! Who, me?

Our story begins with a knight who is drafted.

No money—I could try credit.

Our knight's quest for credit leads to confusion. However, adventure awaits him as he learns ten essential objectives, some of which are illustrated on the next few pages.

Objective Three:
What is a Credit Bureau?

Objective Six:
The Elements of the Truth in Lending Act.

Objective Nine:
You bought it.
You could be stuck with it.

BROKEN?
But I only
used it
once!

As our knight works his way to obtaining credit through many trials, the student works his way to learning with action involvement.

ACTIVITY ONE –

Go to the learning resource center and in the file folder 113 you will find a booklet entitled *Your Credit Contract*. Check the booklet out from the learning resource room coordinator. Then look over this booklet and write a review of it on a separate sheet of paper.

PERFORMANCE is measured in student self-tests at various points throughout the packet.

There is to be done a Contest of Mental Gymnastics wherein you are to be asked questions based upon the feats and skills that you have developed in your recent military campaign.

The winner of the contest is to be allowed to ask for the king's number 1 daughter and will receive revocation of all existing debts. The second, third, or fourth place winners are to receive the King's other daughters.

Merlin the Magician instantly turns the holder of last place into a frog.

CONSUMER EDUCATION: THE NEED TO INDIVIDUALIZE

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Consumption is one of the most personal of economic activities in which an individual engages during a lifetime. It manifests itself in terms of a person's manner of dress, domicile, mode of transportation, nourishment, and overall standard of living. Obviously, consumption is a pervasive set of behaviors which affect each individual. Since a consumer's role is a complex individual experience, education for this role should be as personal as possible. The OSPI "Guidelines for Consumer Education," state,

> . . . to have the greatest impact, consumer education content and presentation must be oriented to students' current concerns and to the recognizable interests of themselves and their families.[1]

When this is done, students readily learn that consumer decisions must be based upon factual knowledge and the application of basic economic principles.

A prime reason for individualized instruction in consumer education arises from the importance of behavioral changes in the affective domain. A primary objective of consumer education is the development of an analytical attitude to be used when spending a limited income to satisfy an unlimited amount of needs and wants. Through individualized instructional activities, students are given the opportunity to develop an analytical attitude through the study of everchanging trends in consumer roles, products, and services.

Individualized instruction in a consumer education program helps to meet the basic need of teaching students how to learn. Since consumer concepts become increasingly important as the student assumes more substantial consumer decisions, the need for knowledge of consumer issues becomes vital later in life. To be truly informed, the consumer must constantly be keeping up to date. With individualized instructional units the student is confronted with the gathering, synthesizing and evaluating of materials on his own which are responsibilities he should assume for the remainder of his life.

Recent business education writings suggest that consumer education is an excellent starting point for the development of individualized instruction. In a recent yearbook, Ted Boduch states:

> . . . the opportunity for change in consumer education methodology has never been as great as it is in this decade. Support is found from quiescent segments of our society. Students, parents, businessmen, and taxpayers are demanding change. Teacher education institutions and professional teachers' organizations are aware of these demands and are reacting positively to encourage change. With such momentum, one must view the seventies as the decade of unprecedented opportunity and challenge for consumer educators.[2]

Evolution of an Individualized Consumer Education Program

The consumer education program at Lake Park High School in Roselle, Illinois, has attempted to implement the findings of research involving content and methodology in consumer education. When the Seventy-fifth Illinois General Assembly passed Senate Bill 977 requiring consumer education in grades 8-12, the requirements of the law were met by changing a previously elective consumer education course into a required course for all seniors. The course is one semester in length and offered at the twelfth grade level in order to capitalize on the learning-readiness principle.

During the first year, the required course was offered as a semester course, meeting 18 weeks in groups of 40. After the 1970-71 school year, it was thought that there was a need for more individual teacher-student contact. A second requirement of the course at this time was the completion of 38 commercially prepared individualized instructional units. During the 1971-72 school year, further evaluation revealed the need for smaller classes; hence, class size was reduced to 25. The individual units were still an integral aspect of the program.

After the 1971-72 school year, another evaluation of the program revealed the need for seminar-sized groups of 12-15 students. It was also found that the 38 commercially prepared units could provide a more programmed approach. Eighteen seminar topics were developed in terms of behavioral goals. An objective system of evaluation was related to seminar goals and the 38 individual units. The seminar topics included such areas as sources and cost of credit services, consumer periodicals, the consumer and the law, rental of apartments, the automobile and the consumer, life and health insurance, and brand comparisons.

An exemption test was developed to meet the needs of students who could demonstrate a high level competency of consumer learnings. The test was based upon the behavioral objectives developed for the course. Those students who could demonstrate a high level of competency were exempted from the course. An average of 8 percent of students taking the examination have exempted out of consumer education each semester. The exemption examination also serves as a pretest and diagnostic device for students not passing it.

Individual Units

In conjunction with the seminar phase of the program, students complete 38 individual units. These units were purchased from the Grolier Company of New York, New York. After the first year of use, the manner for utilizing the units was changed to make them more effective. Students complete the units under the direction of a teacher-aide who distributes materials, grades tests, and records results on the individual student's record card. Students are free to work units during their unscheduled time during the school day. They may work the units in any sequence they choose.

When the student starts to work a given unit, a booklet or tape is issued to the student for study. After the student completes a self-test, he then proceeds to ask for the unit test. The student must pass the unit test with a score of 90 percent. If the student fails, he then restudies the material and is allowed to take the unit test one more time. If the student fails a second time, the credit for that unit is lost. Individual units account for 50 percent of the student's evaluation in the course.

The response to the program by students has been positive. Many benefits are derived from basing the program upon experiences and attitudes of students. These benefits involve high levels of student interest in seminar activities, observable attitude changes, and greater self awareness on the part of students and instructors alike. Future plans call for further expansion of time allocation to seminar and types of active student involvement in the learning process of consumer education.

FOOTNOTES

1. Office of the Superintendent of Public Instruction, State of Illinois. *Guidelines for Consumer Education*, 1972, p. 2.

2. Boduch, Theodore J. "Consumer Economics." *Changing Methods of Teaching Business Subjects*, Tenth Yearbook. Washington, D.C.: National Business Education Association, 1972, p. 23.

COOPERATIVE EDUCATION
Individualization from the Start!

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Prologue

Hey, I'm an INDIVIDUAL–I want to be treated like one! Don't address me as everybody; I'm ME. Yes, school is okay most of the time, but the establishment is ruled by silly rules of "do and don't"–it treats me like a kid. I want a job, I need money, I want to be somebody. "Help Wanted" jobs frequently require experience–with first job, where do I get it? Hear me, help me–treat me as an INDIVIDUAL.

Who Knows Anything About Me?

In a Cooperative Education program, the program is designed for the individual. Briefly reviewed, every phase is individualized education:

1. The program application is initiated by the student after meeting with his/her counselor. An added insight of the student can be gained by the coordinator in requesting the counselor to complete a critique identifying any special needs.

2. A transcript of the student is obtained from the registrar. Three important pieces of information are gleaned from this instrument: past attendance and punctuality pattern; courses taken and grades earned to date; and test scores which have a potential implication.

Consequently, the application form, the counselor's assessment, and the transcript all serve as tools for the coordinator regardless of the type of cooperative program (OE, DO, EE, DE, HERO, CWT, CC, HO) to make proper job placement. Teacher recommendations as well as past employers give additional input, too.

One to One

The teacher coordinator is charged with the responsibility of providing the student with an individualized learning experience compatible with his/her pre-identified abilities. The interview between the student and the coordinator becomes an exchange of program information and understandings. The

individual student's interests and needs are further expanded, thus helping the coordinator in directing placement. The coordinator selects the job station to assure proper placement and to reap optimal learning.

My Very Own Classroom!

The business establishment becomes the classroom and the teacher is the employer. As an INDIVIDUAL, the student has been directed to the company where an interview, sometimes a testing program, and then selection is made by a job-training supervisor. The coordinator is well aware of the job expectations and the student's basic ability, interest, and potential. There is purpose to the placement. The individual student is assured that the participating concern accepts the program objectives leading to success and that he/she will not be exploited by performing meaningless tasks.

How Am I Doing?

Instruction can be directed by the teacher coordinator through student evaluation by the employer. The cooperating "teaching colleague" takes pride in doing what is expected and even in exceeding those expectations. Teaching knows no boundaries, nor do individuals need to have restricted learnings; it is the employer who regulates the opportunities for learning. The teacher coordinator helps to direct the student's pacing of added tasks to be introduced, taught, and accomplished. The teacher-coordinator's role becomes one of appraising, encouraging, and suggesting a broader-based experience to both the individual student learner and the employer.

Evaluation should be a happy time. The three-way conference (student, employer, coordinator) affords the student with an audience of two adults, sometimes more, who accentuate the positive attributes but assess candidly areas of concern. Summarizing the evaluation can be performed jointly by the student learner and the coordinator. The conclusion of the evaluation then serves as the beginning for new and recaptured learnings.

Epilogue

Hey, I am employable. I'M SOMEONE. I earn a paycheck. I'm more independent and yet I can do more for others. Others even depend on me!

I've learned; I've received meaningful training. I can hold down a job. My coordinator has supported me in school and at work. My boss understands what I can do; he helps me to overcome and learn what I am supposed to know.

Yes, I am an INDIVIDUAL; I have a job developed just for me.

REFLECTIONS

AN EVOLVING PROGRAM FOR INDIVIDUALIZING LEARNING
Reflections after Four Years

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Many approaches to individualizing instruction have been utilized throughout the United States, among them being information retrieval systems, flexible scheduling, and a performance curriculum. Glenbrook North High School has concentrated its initial efforts in developing a performance curriculum. Perhaps other schools can gain valuable insights into establishing and implementing an evolving program of individualized instruction from a description of our experiences at Glenbrook North.

Preliminary Steps for Establishing Program

The first step in developing the program involved in-service activities for teachers of the schools. At these work sessions, emphasis was given to the philosophy of individualized instruction, evaluation of current course content, and development of measurable performance objectives and materials for the courses of study.

Conceptual Bases of Program

The Glenbrook North approach to individualized learning involves several primary concepts:

1. The underlying philosophy is that educational experiences should be designed to meet the unique needs, interests, abilities, and aspirations of each individual student.

2. Mere coverage of course content is not the goal. Student mastery of studied content is the primary objective.

3. Diagnostic placement pretests are utilized so that students do not repeat learnings already mastered.

4. A contract is used which is merely a paper giving the student the purpose of the learning, the performance objective, and the activities and/or resources that will lead to mastery of the objective.

5. A "C" level of mastery is expected of all students (with the exception of those students with exceptional learning difficulties). No "D" or "F" grades are given. If a student does not complete all terminal course

objectives with a "C" level of mastery, he is given a "C.P." grade, indicating "Course in Progress." An "F" grade for a course will appear on the student's records only when the student graduates or transfers from the school without having completed the course.

6. A student has completed a course when all terminal course objectives have been mastered at a minimum "C" level. It is possible for a student to complete a course before the end of a semester. He then may discontinue attending the class or he can move to the next sequential course. Often students need time beyond the usual 18-week school semester and must enter completion sections or attend summer school.

7. Large class, small group, and individual instruction strategies are utilized.

8. Resource materials are developed by teachers or are purchased from commercial sources in order to offer students several methods to master the learning objectives.

9. Testing is an integral part of the program, for no student may move to a new objective until he has given evidence of mastery of the previous objective. Students not achieving the learning objective must retake tests after additional work on activities and resources.

Advantages of Individualized Instructional Programs

Strengths of the individualized learning program at Glenbrook North are:

1. The "D" student who merely wants a credit in a course by doing the minimum amount of work is gone. Students must reach minimum "C" level mastery.

2. Course organization is completed before the course begins. All terminal course objectives, pretests, contracts containing individual learning objectives, activities and resources, tests, and the final examination are prepared; the teacher spends all his time working with students rather than preparing lesson plans, tests, and other materials during a semester.

3. Every student can experience success as the individualized learning program permits a student more time to complete a course. It also permits students to complete course work ahead of time.

4. By using a variety of learning resources, the student can utilize those resources which best meet his learning style.

5. Teacher talents and abilities are utilized, as never before, in developing new resources and techniques suitable for the student population.

6. The teacher becomes acquainted with more students and knows them better than in a traditional classroom. This is due to planned work in teams, resource center assignments, and individual work with students.

7. Summer curriculum projects have won approval and support of the board of education.

8. Because of paraprofessional assistance, teachers are used more efficiently in that they no longer are assigned study halls and cafeteria supervision.

Problems with an Individualized Instructional Program

Problems in the development of the individualized learning program include:

1. Student accountability is more difficult because it is necessary to permit student access to resources and participation in activities outside of the classroom.

2. Program planning, curriculum development, and the writing of objectives and tests require considerable teacher time. A need exists to gain released time or summer curriculum assignments for such work. Many teachers, though, have completed this work without compensation and released time.

3. The change from a framework of traditionally-oriented instruction to one of individualized instruction is difficult for many teachers, particularly the successful traditional teacher of many years.

4. Individualized instruction offers the student more responsibility for his own learning. Problems of motivation must be solved. The goal is a student who performs because of a desire for learning. The developed resources and activities must attract the student from other school areas where he might waste time.

5. There is a continuing challenge to develop new recordkeeping procedures, student progress reports, honor rolls, class rank, and athletic eligibility requirement reports that are easily understood by parents and which are compatible and capable of conversion for traditionally-oriented schools.

6. Scheduling and teacher-load provisions require careful planning. Student incompletes must be handled the following semester. Such incompletes might include the need for time as short as a week to as long as several months, and require teacher assignment.

Future Plans for Individualized Instruction

The future goals of the individualized learning program at Glenbrook North are concerned with finding even better solutions to the problems previously enumerated. Task forces involving 69 teachers and administrators have been organized on a voluntary basis to study problem areas. Task forces meet after school once a week. In addition, instructional program seminars are conducted by the principal. These are scheduled several times weekly during the school day and are attended by interested teachers for discussing methods to improve instruction.

Future plans include the implementation of a flexible time schedule. The individualized learning program opens the door for the 12-month school year. An expansion of the television distribution center facilities to include more instructional areas is being considered. More emphasis should be given to further individualization of learning objectives for the gifted student and the student with learning difficulties. A continuing study by teachers of student learning processes must be the focal point of in-service seminars and other professional activities, and the results of such study adapted to developing student learning activities and resources.

An important part of any educational program is a continual evaluation and implementation of improvement. This truism certainly is valid for an individualized approach to instruction. Any school with an individualized approach to learning should have an evolving program.

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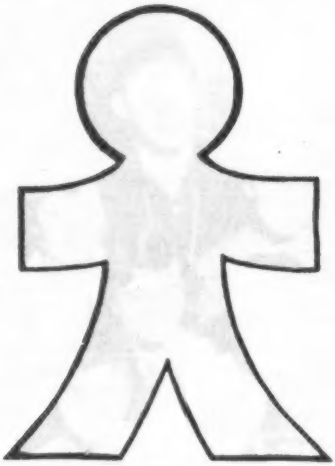

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